CLAIMS:

1. A drug selected from the group consisting of at least one bisphosphonate when used for promoting new bone formation at a fracture site.

2. A drug selected from the group consisting of at least one bisphosphonate when used for treating a fractured bone.

3. The drug of claim 1 or claim 2 wherein the bisphosphonate is Zoledronate.

4. The drug of claim 1 or claim 2 wherein the drug is a combination of two or more bisphosphonates.

5. The drug Zoledronate when used for promoting new bone formation.

6. The drug of claim 5 when used for promoting new bone formation between a bone and a prosthesis, bone fixation device or any other bone or dental implant.

7. The drug of any one of the preceding claims when administered to an individual as a single dose.

8. The drug of any one of the preceding claims when administered to an individual perioperatively.

9. Use of a drug selected from the group consisting of at least one bisphosphonate for the manufacture of a medicament for promoting new bone formation at a fracture site.

10. Use of a drug selected from the group consisting of at least one bisphosphonate for the manufacture of a medicament for treating a fractured bone.

11. Use of the drug of claim 9 or claim 10 wherein the drug is Zoledronate.

12. Use of the drug of claim 9 or claim 10 wherein the drug is a combination of two or more bisphosphonates.

13. Use of the drug Zoledronate for the manufacture of a medicament for promoting new bone formation.

14. A method for treating a fractured bone, the method including administering to a subject with a fractured bone a therapeutically effective amount of a drug selected from the group consisting of at least one bisphosphonate.

15. The method of claim 14 wherein the drug is administered to the subject as a single dose.

16. The method of claim 15 wherein the single dose of drug is

administered at an early stage of treatment of the fractured bone.

17. The method of claim 14 wherein the mode of administration is as a perioperative intravenous infusion.

18. The method of claim 14 wherein the mode of administration is oral.

19. The method of claim 14 wherein the mode of administration is transdermal.

20. A method of treating a fractured bone, the method including the steps of:

(a) administering to a subject with a fractured bone a therapeutically effective amount of a drug selected from the group consisting of at least one bisphosphonate; and

(b) providing a vibratory stimulus to the fractured bone.

21. The method of claim 20 wherein the vibratory stimulus is provided by ultrasound stimulation or vibration stimulation.

22. The method of claim 20 or claim 21 wherein the vibratory stimulus includes periodically providing a vibratory stimulus at the resonant frequency of the bone.

23. The method of claim 22 wherein the resonant frequency is calculated as a function of the bone's vibratory response to the vibratory stimulus.

24. The method of any one of claims 20 to 23 wherein the vibratory stimulus is provided at a late stage in the treatment of the fractured bone.

25. The method of any one of claims 20 to 23 wherein the step of providing a vibratory stimulus is concurrent with the step of administering a therapeutically effective amount of the drug.

26. The method of claim 25 wherein the vibratory stimulus is provided and the therapeutically effective amount of the drug is administered at an early stage in the treatment of a fractured bone.

27. A drug selected from the group consisting of at least one bisphosphonate when used for promoting new bone formation at a fracture site in an individual suffering from delayed union of a fracture.

28. A method for promoting new bone formation at a fracture site in a subject suffering from delayed union of a fracture, the method including administering to the subject a therapeutically effective amount of a drug selected from the group consisting of at least one bisphosphonate.

29. The method of claim 28 wherein the at least one bisphosphonate is administered parenterally as a single dose at or near the time of surgery.

30. The method of claim 29 wherein a further parenteral dose of the at least one bisphosphonate is administered about four to six weeks after the initial dose.

31. The method of claim 29 wherein further oral doses of the at least one bisphosphonate are administered in a daily or second daily regimen commencing about four to six weeks after the initial dose for a period of about two months or until sufficient new bone has been formed.

32. A method of promoting new bone formation in a subject, the method including the steps of surgically performing the procedure of distraction osteogenesis and administering to the subject a drug selected from the group consisting of at least one bisphosphonate.

33. The method of claim 32 wherein the at least one bisphosphonate is administered parenterally as a single dose at or near the time of surgery.

34. The method of claim 33 wherein a further parenteral dose of the at least one bisphosphonate is administered either at the end of the distraction period or up to three months after the initial dose.

35. The method of claim 33 wherein further oral doses of the at least one bisphosphonate are administered in a daily, second daily or weekly regimen.

36. The method of claim 35 wherein the regimen commences about one to three months after the initial parenteral dose for a period of about two months.